Qliktag's IoT Platform & Where Does Blockchain Fit In?

Published

21st April 2021
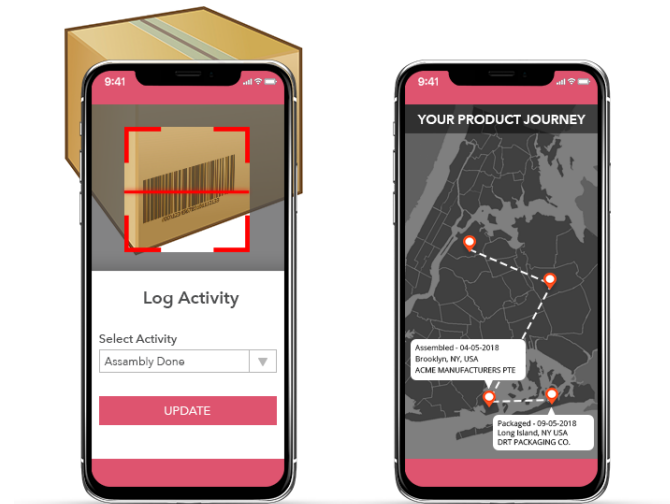
QLIKTAG

An Overview

There is tremendous hype around Blockchain these days and we started to wonder how Blockchain applies to Qliktag's IoT platform. Clearly Qliktag's IoT platform is not a blockchain and there is no intent to ever incorporate or turn the Qliktag Platform into a blockchain.

In fact, to achieve the goals of Product Trust which include Truth, Transparency and Traceability, both an IoT platform like Qliktag's and blockchain have a role to play.
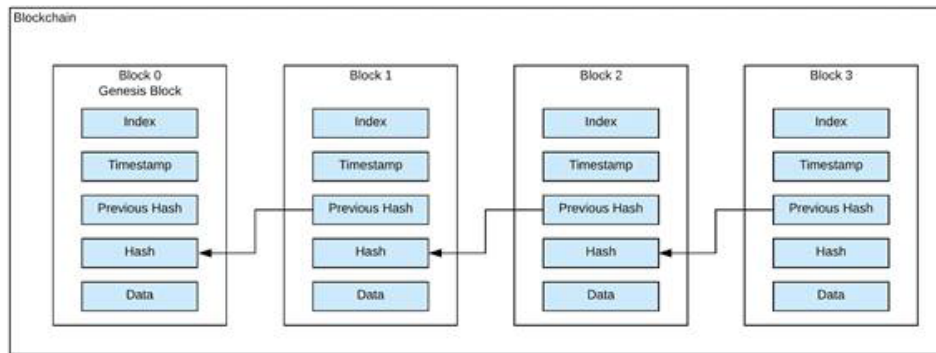
Product Trust emerges from being able to deliver Truth, Transparency & Traceability.

Digital Twins vs Non-Fungible Assets

At a high level, one can think of Qliktag's IoT platform as the repository of digital twins of non-fungible assets much like a web address holds the digital asset associated with a NFT that can be transacted on the Ethereum blockchain. So while the blockchain is suitable for storing and maintaining ownership & transactions through a token that digitally represents an asset, individual product or batch of products, it is limited in storing large numbers of data attributes consumer products require which can be represented by the token. For example, within the Qliktag Platform today, some food product manufacturers store over 500 attributes / data points for a single product SKU. This can include product certification data, allergen information, nutrients, ingredient percentages, ingredient provenance and more. Blockchain data is designed to store ledger type data attributåes like tokens representing a product or owner, datetime stamps and similar data points. In a real word scenario a combination of both would be used in tandem to digitize both the product as well as changes in ownership and journey of the product as it moves.

Sample of Data in Blockchain

Sample of Data in Qliktag IoT Platform

As such the token typically points to an external location where detailed information (digital twin) is maintained or in the case of a digital asset, the asset itself can be located. Because the data that can be kept on a blockchain is limited it cannot be used as a substitute for a platform like Qliktag's Platform. Furthermore, by definition, the data in a blockchain is generally open to all participants. However, there is often information that needs to be maintained and only made available to specific participants.

Nevertheless, the blockchain has an importantant role to play in ensuring the digital twin is accurate.

QLIKTAG

0fd68f3b-037f-4adb-875b-5d099c995b0e

Short URL

https://78bxy77d3.qlkt.ag

SKU Level Attributes	Serial Level Attributes
Barcode No	Serial No
SKU ID	Owner Name
Product Name	Sold By
Description	Location
Ingredients	

Qliktag's IoT platform is different than most IoT platforms in that it is not meant for connecting devices and industrial equipment. It is specifically geared towards everyday products such as a Shampoo bottle or a box of cereal, that one does not think of as being connected to the Internet. However, via a trigger such as QR code, barcode, NFC, RFID, image recognition and a corresponding reader like a mobile phone, POS scanner, etc., these products can participate in the Internet of Things via "digital twin" and enable novel approaches to processes such as track and trace, labels, warranty registration, and product authentication. However, it is key that this information is accurate.

The Complete Picture

Qliktag's IoT platform is different than most IoT platforms in that it is not meant for connecting devices and industrial equipment. It is specifically geared towards everyday products such as a Shampoo bottle or a box of cereal, that one does not think of as being connected to the Internet. However, via a trigger such as QR code, barcode, NFC, RFID, image recognition and a corresponding reader like a mobile phone, POS scanner, etc., these products can participate in the Internet of Things via "digital twin" and enable novel approaches to processes such as track and trace, labels, warranty registration, and product authentication. However, it is key that this information is accurate.

Let's take the lifecycle of a consumer product. It originates at a manufacturing facility that could be owned by the brand or a third party that is manufacturing on behalf of the brand. The product then typically gets passed to a logistics company for delivery to the brand's warehouse or perhaps directly to the retailer or e-commerce company and then finally to the consumer.

The "digital twin" maintains data and information about the Thing as it traverses its lifecycle from production to consumption. Along the way, the data and information about the Thing gets modified as required through the use of triggers and readers or simply updating the data. The brand is clearly relying on other parties to update the digital twin as it moves through its lifecycle. Therein lies the issue. How can one be certain the data within the "digital twin" is accurate, reflects the true state of the physical product?

For simplicity sake, let's assume that the digital twin should only be manipulated by the party that has physical possession of it. If we look at the lifecycle, the physical possession goes from manufacturer to logistics company to brand to retailer and finally to consumer – there can be of course other parties in the chain but let's assume this is the chain for a given product.

The "digital twin" maintains data and information about the Thing as it traverses it lifecycle from production to consumption. Along the way, the data and information about the Thing gets modified as required through the use of triggers and readers or by someone simply updating the data. Therein lies the issue. How can one be certain the data within the "digital twin" is accurate and reflects the true state of the physical product?

Blockchain is an ideal solution for recording ownership and title transfer using non fungible tokens (NFTs) that point to the authoritative Digital Twin.

As the product gets transferred from one party to the next, that information can be recorded in a blockchain. This information can then be used by the Qliktag Platform to ensure that the data is only being updated through an account consistent with the ownership recorded on the blockchain.

> " Blockchain is an ideal solution for recording ownership and title transfer using non fungible tokens (NFTs) that point to the authoritative Digital Twin. "

The Qliktag Platform System Landscape
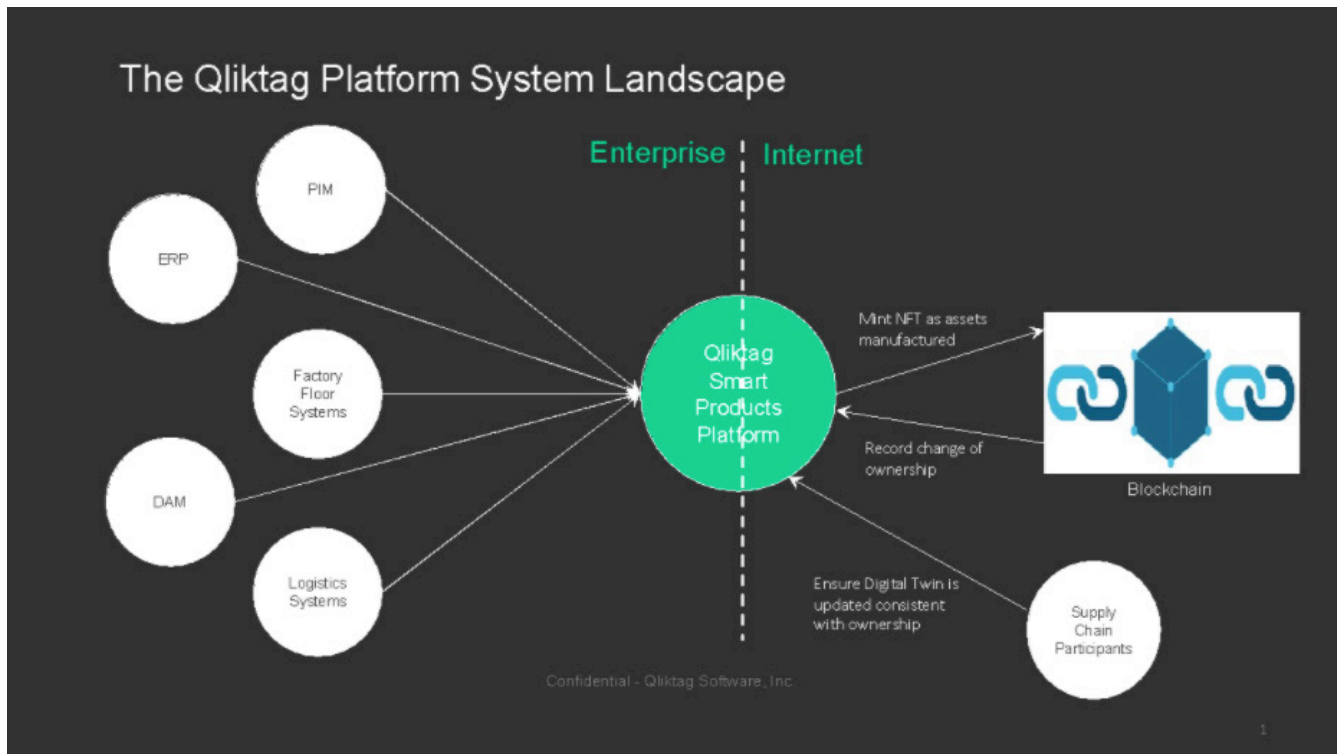
The Qliktag Platform System Landscape

> " The brand is clearly relying on other parties to update the digital twin as it moves through its lifecycle. Therein lies the issue. How can one be certain the data within the "digital twin" is accurate, reflects the true state of the physical product? "

ABOUT
Qliktag Software

Qliktag Software Inc. is an innovator of software solutions working towards intuitive technology solution that bridge the gap between brands and buyers fostering stronger relationships and more personalized connections between the two.

Headquartered in Newport Beach, California, USA The Qliktag "Internet of Products" Platform is a one-of-a-kind solution for managing product data, serving that product data to other applications and systems in the retail ecosystem while also delivering digital product experiences and interactions for end consumers. With "Product Content Hub" & "Digital Interaction Engine" the Qliktag Platform is an enabler for driving new-age digital businesses for the consumer products industry.

www.qliktag.com
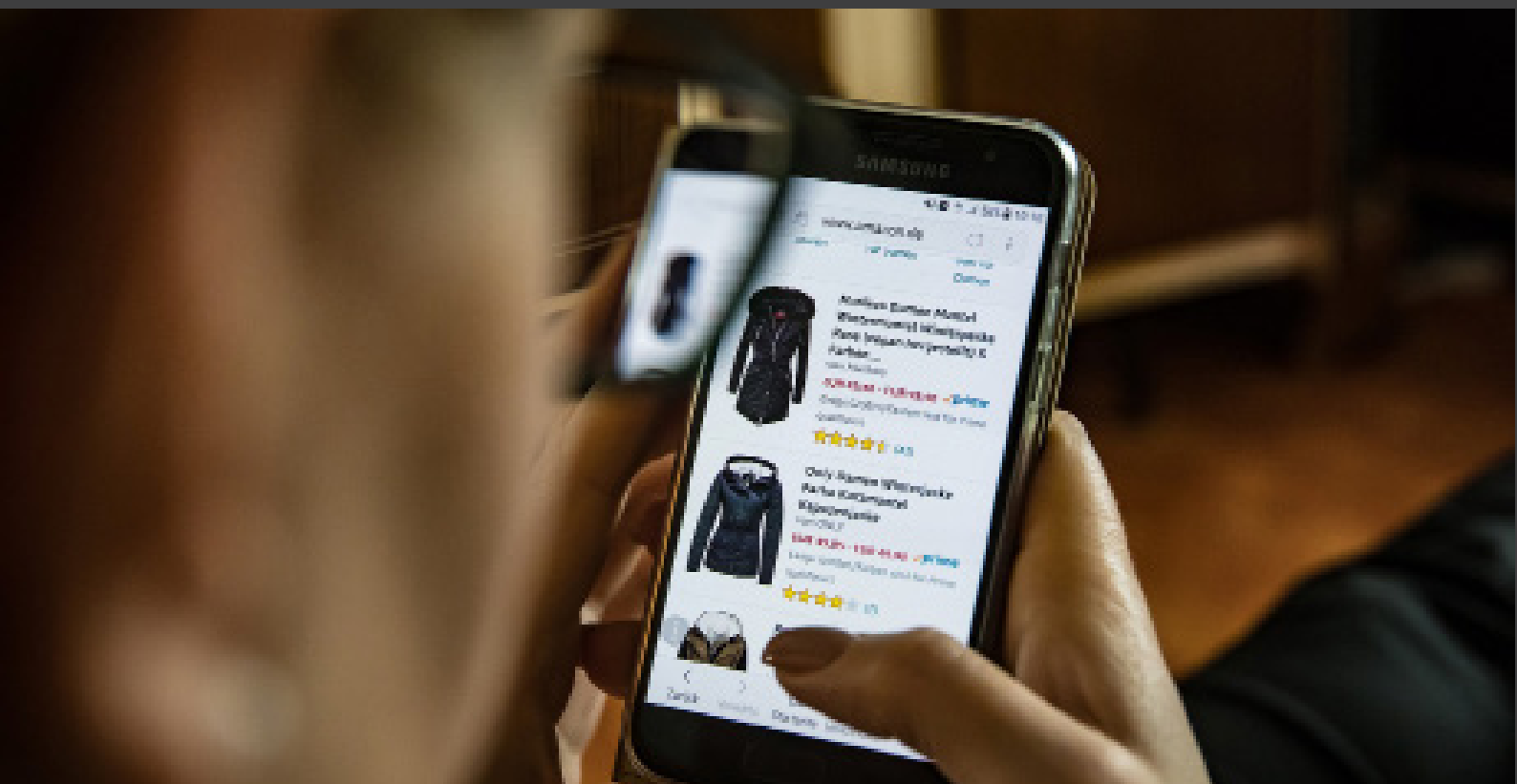
Contact Us

Qliktag Software Inc.
4590 MacArthur Blvd.,
Suite 500,
Newport Beach, CA 92660

+1 949-760-3888

info@qliktag.com
www.qliktag.com

QLIKTAG